

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A silicon capacitor formed on an integrated circuit substrate, comprising:

a metal portion on the substrate;

a silicon nitride (SiN) portion ~~sputtered~~ located on the ~~substrate~~ metal portion; and

a silicon (Si) portion ~~sputtered~~ located on the silicon nitride portion; and

a second SiN portion located on the Si portion wherein the capacitor is formed using a process including depositing metal on the substrate to form the metal portion, sputtering silicon with nitrogen gas to form the SiN portion, removing nitrogen gas flow to deposit the silicon portion, and adding nitrogen gas again to form the second SiN portion.

Claim 2 (currently amended): The silicon capacitor of claim 1, wherein the silicon nitride portion is decreases to decrease leakage.

Claim 3 (cancel)

Claim 4 (currently amended): The silicon capacitor of claim 1, further comprising a second metal portion located on the second SiN portion.

Claim 5 (cancel)

Claim 6 (currently amended): The silicon capacitor of claim ~~[[5]]~~ 1, wherein each layer deposited is approximately forty angstroms thick.

Claims 7-14 (cancel)

Claim 15 (new): A silicon capacitor comprising:

a first metal portion located on a substrate;

an insulator portion located on the first metal portion, the insulator portion comprising a sandwich formed of a plurality of alternating silicon nitride (SiN) layers and at least one silicon (Si) layer; and

a second metal portion located on the insulator portion.

Claim 16 (new): The silicon capacitor of claim 15, wherein the Si layer comprises amorphous silicon.

Claim 17 (new): The silicon capacitor of claim 15, wherein the substrate is a substrate of an integrated circuit having an analog portion and a digital portion.

Claim 18 (new): The silicon capacitor of claim 17, wherein the integrated circuit comprises a multi-mode wireless communication device.

Claim 19 (new): An apparatus comprising:

a first metal layer located on a substrate;

a first nitride layer located directly over the first metal layer;

a silicon layer located directly over the first nitride layer;

a second nitride layer located directly over the silicon layer; and

a second metal layer located directly over the second nitride layer, wherein the apparatus comprises a silicon capacitor to store charge in an integrated circuit.

Claim 20 (new): The apparatus of claim 19, wherein the first nitride layer and the second nitride layer comprise silicon nitride.

Claim 21 (new): The apparatus of claim 19, further comprising a sandwich layer including a third nitride layer and a second silicon layer, the sandwich layer located on the silicon layer.

Claim 22 (new): The apparatus of claim 19, further comprising:

a second silicon layer located directly over the second nitride layer; and

a third nitride layer located directly over the second silicon layer.

Claim 23 (new): The apparatus of claim 19, wherein the integrated circuit comprises a mixed signal device.

Claim 24 (new): The apparatus of claim 19, wherein the silicon layer comprises amorphous silicon.

Claim 25 (new): The apparatus of claim 19, wherein the integrated circuit comprises a wireless multi-mode communication device.